

REMARKS

Introduction

Claims 1-15 are pending in this application. Claims 1 and 15 have been amended. Claim 1 is in independent form.

The Rejections under 35 U.S.C. § 101

Claim 15 was rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. The Examiner stated that a program is considered non-statutory subject matter unless explicitly stored on a computer-readable storage medium.

Claim 15 has been amended to recite *a computer-readable medium storing a program* which, when executed, causes a computer to function as the storing means or the data transferring unit of the data storage system using a network according to claim 1.

For at least the foregoing reasons, withdrawal of the Section 101 rejection is respectfully requested.

The Rejections under 35 U.S.C. § 103

Claims 1, 5-8, 12, 14, and 15 were rejected under 35 U.S.C. § 103(a) as being obvious from U.S. Patent Application Publication No. US 2002/0004816 A1 to Vange in view of U.S. Patent Application Publication No. US 2004/0054698 A1 to Iwami and further in view of U.S. Patent Application Publication No. US 2004/0049636 A1 to Campbell; claims 2-4, as being obvious from Vange, Iwami, and Campbell, and further in view of U.S. Patent No. 5,598,524 to Johnston Jr; claims 9-11 and 13, as being obvious from Vange, Iwami, and

Campbell, and further in view of U.S. Patent Application Publication No. US 2002/0138504 A1 to Yano.

Applicants submit that amended independent claim 1, together with the claims dependent therefrom, are patentably distinct from the cited references for at least the following reasons.

First, support for the amendments to claim 1 can be found in the originally filed application; see, e.g., page 8, lines 1-7.¹

One notable feature of the present invention is that the data storage device 100 comprises a first data storage unit 110 and a second data storage unit 120. These two types of data storage units show different performance. That is, the first data storage unit 110 performs a process of storing and saving data to be deposited, though the second data storage unit 120 performs a process of temporarily storing data to be deposited.

A user can choose any one of data storage units to deposit data. According to the embodiment shown in Fig. 1, when a user using terminal device 10 chooses first data storage unit 110, data is transferred from terminal device 10 to data storage device 100 through first network N1 and stored and saved in unit 110. However, when he or she chooses second data storage unit 120, data is transferred and temporarily stored in unit 120 and then is further transferred to, for example, external storage site 210 through second network N2 by data transferring unit 130. In the latter case, "management information" including information indicating a location of the external storage site 210 is sent to a terminal device 10 from data transferring unit 130, and storing means 12 built into terminal device 10 stores the "management information" into removable storage medium 11 such as an IC card. In the

¹It is of course to be understood that the references to various portions of the present application are by way of illustration and example only, and that the claims are not limited by the details shown in the portions referred to.

former case, when the user tries to withdraw the saved data, the data is simply transferred from first data storage unit 110 to terminal device 10 through first network N1.

However, in the latter case, first, storing means 12 reads out the "management information" from removable storage medium 11 and sends it to data storage device 100. Then, data transferring unit 130 transfers the saved data from external storage site 210 whose location is indicated by the "management information" to second data storage unit 120, and finally the saved data is transferred to terminal device 10. A user can thus suitably choose between using the respective data storage units 110 and 120 based on a judgment of choosing second data storage unit 120 for data of a large volume that is preferably not subject to memory capacity restrictions, for data that can be infected by a virus, and for data for which a more advanced degree of security is required, and choosing first data storage unit 110 for data requiring a high-speed storage operation.

Vange, as understood by Applicants, discusses a network storage system having an intermediary computer. For example, in the system shown in Fig. 2 of Vange, there are front end computers 201 and back end computers 203 functioning as an intermediary computer 200 between client computer 205 and data server 210. When a user tries to deposit data, the data is first transferred from client computer 205 to intermediary computer 200 and then is transferred to storage server 210. However, even if Vange's system may look similar to the system of the present invention in certain respects, there are fundamental and important differences between Vange's system and the system of the present invention, for example as follows.

<Difference 1>

Vange's system does not have a first data storage unit (110), because the data transferred to the intermediary computer (front end) are temporarily stored there and then forwarded to the external storage. The system of the present invention comprises two kinds of storage units having different functions; that is, a first data storage unit (110) performing a process of storing and saving data to be deposited, and a second data storage unit (120) performing a process of temporarily storing data to be deposited. The Examiner states that Iwami teaches a system having a local storage unit and a central storage unit. However, neither Vange's system nor Iwami's system comprises two kinds of storage units having different functions.

<Difference 2>

In Vange's system, a user cannot choose between a first data storage unit (110) or a second data storage unit (120). Though the Examiner states that Campbell teaches choosing between a first and second storage unit in accordance with the operator's selection, Applicants do not agree with the Examiner's interpretation. In Campbell, both of the local storage and the shared external storage are a storage performing a process of saving data to be deposited, but not a storage performing a process of temporarily storing data to be deposited. In other words, Campbell's system comprises only a storage unit corresponding to a first data storage unit (110) of the present invention, but not to a second data storage unit (120).

<Difference 3>

In Vange's system, "management information" is not sent to a terminal device (10, 20) that is executing the data deposition process for the data forwarded to the external storage site. The Examiner states that Vange teaches that "file location information" is sent to a client to find requested data ([0063], line 9). Applicants do not agree with the Examiner's interpretation. According to the present invention, "management information" includes information indicating a location of the external storage site to which data to be saved is forwarded. Therefore, "file location information" of Vange may correspond to "management information"; however, "file location information" of Vange is stored in storage management server 212, but not in client 205. For example, in the implementation of Fig. 5 of Vange, "token" is given to storage management server 212 and "file location information" is returned to front end 201. Client 205 does not have "file location information." The following description in [0060] of Vange is noted, that is:

Because these links do not refer directly to a server/directory/file name at which the data object is located, they are referred to herein as "tokens". Client 205 need not be aware of the actual location at which a data object is stored.

Therefore, client 205 may aware of "tokens", but not actual "file location information." Similarly, in the implementation of Fig. 6 of Vange, "token" is given to storage management server 212 and "file location information" is returned to first front end 201. Client 205 does not have "file location information."

The Examiner pointed out the description of [0063], that is, "In the implementation of FIG. 6, front-end 201 uses the file location information to generate a redirect response to client 205 that points the client 205 to an alternative front-end 201 that can access the requested data." This description implies "redirect operation" from first front end 201 (left

side in the figure) to second front end 201 (right side in the figure). In this implementation, "file location information" is still managed by storage management server 212 and is not sent to client 205. That is, "file location information" is supplied from storage management server 212 by giving "token." In this implementation, first front end 201 generates "redirect response" and gives it to client 205. Then client 205 carries out a redirect operation to access second front end 201 with a redirected request. However, "redirect response" given to client 205 is not "file location information," but "information indicating second front end 201." That is, "file location information" is information indicating an actual location where the requested data are saved, though "redirect response" is information indicating another front end which is to carry out an access the requested data. Therefore, Vange does not disclose sending "management information" to a terminal device (10, 20) that is executing the data deposition process for the data forwarded to the external storage site.

Similarly, Vange does not disclose that "management information" is received from a terminal device (10, 20) that is executing the data withdrawal process, because client 205 does not have "management information" or "file location information." The Examiner insisted that, in Vange's system, when a request to download data to be withdrawn from the second data storage unit (12) is made by the data withdrawal process, "management information" is received from a terminal device (10, 20) that is executing the data withdrawal process. According to the Examiner's insistence, as described in [0062], lines 3-5, "token" is received from client, which identifies the client and the data requested, and is used to locate and read data. Of course, "token" is used to locate and read data, but is not "information indicating a location of the external storage site."

In other words, in Vange's system, "information used to locate and read requested data (token)" is sent to and received from client 205, but "information indicating a location of the external storage site (management information)" is not sent to or received from client 205.

<Difference 4>

Vange does not teach or suggest "the storing means (12, 22)." According to the present invention, "the storing means (12, 22)" is built into the terminal device and has a function to store "management information" into the removable storage medium (11, 21) and a function to send "management information" stored in the removable storage medium (11, 21) to the data storage device (100). As mentioned above, "token" in Vange's system is not "management information." Therefore, client 205 has nothing to do with "management information."

Further, "the storing means (12, 22)" of the present invention executes a process of storing "management information" into the removable storage medium (11, 21) as an execution result of the data deposition process. That means that the storing process of "management information" is carried out automatically without any particular manipulations by an operator. In other words, "management information" is automatically stored into the removable storage medium (11, 21) by a spontaneous procedure of the storing means (12, 22) and the operator does not have to be aware of a manual storing procedure.

In Vange's system, client computer 205 might comprise some removable storage medium and any data may be stored into the medium by the operator's manual manipulation. However, according to the description of [0059], client 205 need only be configured to

communicate conventional request/response exchanges and does not need to implement specialized hardware or software. On the contrary, "the storing means (12, 22)" of the present invention is realized by a specialized software implemented into the terminal device to carry out an above-mentioned automatic and spontaneous storing procedure. Therefore, Vange does not teach "the storing means (12, 22)" built into the terminal device. Nothing in Iwami or Campell, even assuming such a combination would be permissible, would supply what is missing from Vange.

For at least the foregoing reasons, claim 1 is seen to be clearly allowable over Vange, Iwami, and Campbell, whether considered separately or in any permissible combination (if any).

The dependent claims

The other claims in this application are each dependent from one or another of independent claim 1 discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

Conclusion

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and early passage to issue of the present application.

Respectfully Submitted

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